

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1 (previously amended)
Claim 2 (previously amended)
Claim 3 (previously amended)
Claim 4 (previously amended)
Claim 5 (original)
Claim 6 (original)
Claim 7 (cancelled)
Claim 8 (previously amended)
Claim 9 (previously added)
Claim 10 (previously added)
Claim 11 (previously added)
Claim 12 (previously added)
Claim 13 (previously added)
Claim 14 (previously added)
Claim 15 (previously added)
Claim 16 (previously added)
Claim 17 (previously added)
Claim 18 (new)
Claim 19 (new)
Claim 20 (new)

1 1. (Previously Amended) Data entry device comprising:

2 a keyboard having a plurality of multifunction key
3 positions;

4 a plurality of keys each key containing an inscription on
5 the keycap thereof representing a character or function and
6 containing a multi-bit binary code therein identifying the
7 character or function, said keys being capable of being
8 positioned in any one of the key positions in the keyboard, said
9 keys being responsive to user contact to the keycaps thereof;

10 a circuit matrix disposed below said keyboard said circuit
11 matrix being capable of detecting the binary code when one of the
12 keys is contacted to produce an electrical signal representative
13 of the binary code associated with the contacted key;

14 a standard interface connector to connect the keyboard to a
15 computer; and

16 a controller for converting the output of the circuit matrix
17 for the contacted key to one which is recognizable by the
18 computer so that the output of the keyboard provided to the
19 standard interface connector correctly identifies the contacted
20 keys character or function to the computer irrespective of the
21 position of the key on the keyboard.

1 2. (Previously Amended) The data entry device of Claim 1,
2 wherein the controller includes a look-up table responsive to the
3 multi-bit output of the circuit matrix the multi-bit codes for
4 each of the keys to provide a standard scan code signal
5 recognizable by any computer compatible with the interface
6 connector.

1 3. (Previously Amended) The data entry device of Claim 2 wherein
2 the keys have in the base of the key a plurality of locations
3 each representing one digit in the multi-bit binary code and one
4 or more pins each positioned one of the locations so that the
5 keys all contain a different combination of locations with posts
6 and without posts to identify them distinctively from the other
7 keys in accordance with the multi-bit binary code.

1 4. (Previously Amended) The data entry device of Claim 2 wherein
2 the keys each have a circuit embedded therein storing the multi-
3 bit binary code identifying each key distinctively from the other
4 keys and have electrical contacts providing excitation to the
5 circuit and connecting it to the matrix to provide a multi-bit
6 code signal to the controller to identify the key.

1 5. (Original) The data entry device of Claim 3 wherein the
2 circuit matrix provides the bits of the multi-bit binary code to
3 the controller in parallel.

1 6. (Original) The data entry of Claim 4 wherein the circuit
2 matrix provides the bits of the multi-bit binary code to the
3 controller serially.

7. (Cancelled)

1 8. (Previously Amended) The data entry device of Claim 2
2 wherein the circuit matrix contains a plurality of capacitive
3 switches each switch responsive to one of the pins to generate a
4 key make signal.

1 9. (Previously added) The data entry device of Claim 2 wherein
2 the keyboard has openings to accept the keys and expose the
3 multi-bit binary code stored therein to the circuit matrix
4 wherein the keys are spring loaded with arms with feet that hold
5 the keys in position and are flexible to enable removal of the
6 key and the binary code therein from the keyboard to permit
7 selective placement of the keys in desired keyboard locations.

1 10. (Previously Added) Data entry device for the disabled
2 comprising:

3 a keyboard having a plurality of multifunction key
4 positions;

5 a set of movable keys each key of the set containing an
6 inscription on the keycap thereof representing a different
7 character or function of the key in the set and containing a
8 multi-bit binary code stored therein identifying the character or
9 function of the particular key, said keys being capable of being
10 positioned in any one of the key positions in the keyboard so
11 that any key and its character identifying code can be placed in
12 any key position, said keys being responsive to user contact to
13 the keycaps thereof,

14 a circuit matrix disposed below and in a fixed relationship
15 to said keyboard, said circuit matrix having detection positions
16 for each of the plurality of keys which detection position are
17 each capable of detecting the binary code of any one of the keys
18 when that key is contacted to produce an electrical signal
19 representative of the binary code associated with the contacted
20 key;

21 a standard interface connector to connect the keyboard to
22 any computer compatible with the interface; and

23 a controller for converting the output of the circuit matrix
24 for any contacted key to one which is recognizable by the
25 computer so that the output of the keyboard provided to the
26 standard interface connector correctly identifies the contacted
27 keys character or function to the computer irrespective of the
28 position of the contacted key on the keyboard so that the key can

29 be moved to configure the keys on the keyboard in accordance with
30 a users disability.

1 11. (Previously added) The data entry device of Claim 10,
2 wherein the controller includes a look-up table responsive to the
3 multi-bit output of the circuit matrix of each of the keys to
4 provide a standard scan code signal recognizable by any computer
5 compatible with the interface connector.

1 12. (Previously added) The data entry device of Claim 10
2 wherein the keys have in the base of the key and movable with key
3 a plurality of locations each representing one digit in the
4 multi-bit binary code and one or more pins each positioned one of
5 the locations so that the keys all contain a different
6 combination of locations with posts and without posts to identify
7 them distinctively from the other keys in accordance with the
8 multi-bit binary code.

1 13. (Previously added) The data entry device of Claim 10
2 wherein the keys each have a circuit embedded therein storing the
3 multi-bit binary code identifying each key distinctively from the
4 other keys and have electrical contacts providing excitation to
5 the circuit and connecting it to the matrix to provide a multi-
6 bit code signal to the controller to identify the key.

1 14. (Previously added) The data entry device of Claim 11
2 wherein the circuit matrix provides the bits of the multi-bit
3 binary code to the controller in parallel.

1 15. (Previously added) The data entry device of Claim 12 wherein
2 the circuit matrix provides the bits of the multi-bit binary code
3 to the controller serially.

1 16. (Previously added) The data entry device of Claim 11
2 wherein the circuit matrix contains a plurality of capacitive
3 switches each switch responsive to one of the pins to generate a
4 key make signal.

1 17. (Currently Amended) The data entry device of Claim [[2]] 8
2 wherein the keyboard [[has]] openings [[to]] accept the keys and
3 expose the multi-bit binary code stored therein to the circuit
4 matrix wherein the keys are spring loaded with arms with feet
5 that hold the keys in position [[and]] which arms are flexible to
6 enable removal of each of the keys and the binary code therein
7 from the keyboard independently of the other keys so that removal
8 and replacement of one key does not require movement of adjacent
9 keys to permit selective placement of the keys in desired
10 keyboard locations.

1 18. (New) The data entry device of claim 8 wherein the keyboard
2 openings accept the keys and expose the multi-bit binary code
3 stored therein to the circuit matrix wherein the keys are spring
4 loaded with arms with feet that hold the keys in position which
5 arms are flexible to enable removal of each of the keys and the
6 binary code therein from the keyboard independently of the other
7 keys to permit selective placement of the keys in desired
8 keyboard locations without disturbing other keys.

1 19. (New) The data entry device of claim 10, wherein the
2 multifunction key position includes a plurality of spaced
3 keyboard openings in the top surface of the keyboard, one opening
4 for each key position.

1 20. (New) Data entry device for the disabled comprising:
2 a keyboard having a plurality of universal key positions,
3 each position having an opening in a top surface of the keyboard;
4 a set of movable keys each key of the set containing an
5 inscription on the keycap thereof representing a different
6 character or function of the key in the set and containing a

7 multi-bit binary code stored therein identifying the character or
8 function of the particular key, each key being capable of being
9 positioned through the opening for any one of the key positions
10 in the keyboard so that any key and its character identifying
11 code can be placed in any key position desired by a disabled user
12 without disassembly of the keyboard, said keys being responsive
13 to user contact to the keycaps thereof,

14 a circuit matrix disposed below and in a fixed relationship
15 to said keyboard, said circuit matrix having detection positions
16 a different one aligned with each of the openings for each of the
17 plurality of keys, which detection positions are each capable of
18 detecting the binary code of any one of the keys when that key
19 positioned in its aligned opening is contacted by the disabled
20 user to produce an electrical signal representative of the binary
21 code associated with the contacted key;

22 a controller for converting the output of the circuit matrix
23 for any contacted key to one which is recognizable by the
24 computer as the code for the character or function represented by
25 the inscription on the contacted key so that the output of the
26 keyboard provided to the standard interface connector correctly
27 identifies the contacted keys character or function to the
28 computer irrespective of the position of the contacted key on the
29 keyboard; and

30 a standard interface adapter for transmission of converter
31 outputs so that the keys can be moved to position the keys on the
32 keyboard to accommodate the users disability without otherwise
33 modifying or disassembly of the keyboard or modifications of
34 keyboard or computer software.